Electronic Version
Stylesheet Version v1.1.1

Claims

[c1] A lockset tampering detection device which comprises:
Sensing circuitry, operatively coupled to said lockset, responsive to signals indicative of tampering upon said lockset and
Means to determine if the lockset is in its open or locked state and
Means to signal a tampering alarm when said sensing circuitry detects said tampering after said lockset is transitioned from its unlocked state to its locked state

[c2] A method of arming, or disarming a lockset tampering detection device having, sensing circuitry, operatively coupled to said lockset, responsive to signals indicative of tampering, means to signal if the lockset is in its open or locked state and means to signal a tampering alarm when said sensing circuitry detects tampering after said lockset is transitioned from its unlocked state to its locked state, comprising the steps of:
Arming the lockset tampering detection device after the lockset is transitioned from its unlocked to its locked state.
Disarming the lockset tampering detection device after

the lockset is transitioned from its locked state to its unlocked state.

[c3] The lockset tampering detection device of claim 1 wherein the operative connection between said tampering sensing circuitry and said lockset is achieved through circuitry's coupling to the lockset through its bolt by electrical, acoustic, magnetic, optical or other like means serving to signal tampering with the lock, through the bolt, to said sensing circuitry.

[c4] The lockset tampering detection device of claim 1 wherein tampering with said lockset, in said locked state, when not subsequently culminated with a successful unlocking operation within predefined limits, results in signalling of said tampering alarm.

[c5] The lockset tampering detection device of claim 3 wherein said sensing circuitry monitors qualified changes in capacitance between said lockset and a reference conductor as indicative of tampering.

[c6] The lockset tampering detection device of claim 3 wherein the means for achieving said operative connection is an easily installed ribbon cable with integral contacts configured for bolt receptacle alignments and placement.

[c7] The lockset tampering detection device of claim 5 wherein slow changes in capacitance, not indicative of tampering, are ignored.

[c8] The method of claim 2 wherein said arming steps further comprise the sub-steps of:
Inserting a short time delay, to preclude signaling an immediate tampering alarm upon transitioning the lockset from its unlocked to its locked state.
Storing a "just locked" bit and then using the presence of this bit to replace alarm operation at the end of said time delay with an arming operation that also clears the "just locked" bit.
Providing an audible "chirp" upon the clearing of said "just locked" bit to announce that said lockset tampering detection device is then in its armed state

[c9] The method of claim 2 wherein said arming steps further comprise the sub-steps of:
Providing alarm inhibition for a sufficient time to allow normal, authorized means for transitioning the lockset from its locked to its unlocked state.
Providing a sustained tampering alarm when said inhibition time expires without lockset transition to its unlocked state. Said sustained tampering alarm is then made resetable only by first unlocking and relocking said

lockset.

[c10] The method of claim 9 further comprising the steps of:
Automatically reseting and rearming a lockset tampering alarm after a first, relatively long time limit.
Automaticaly resetting and rearming a lockset tampering alarm after a relatively short time limit when first preceeded by said unlocking and relocking sequence.
Ensuring that said sustained tampering alarm is not precluded or terminated by forceably overcomming the lockset's conventional mechanical locking function.

[c11] The lockset tampering detection device of claim 1 further comprising means to signal a conventional multizone security system the status of said lockset such that the state of lockset tampering detection device may be determined to be:
disarmed or
armed or
in alarm

[c12] The lockset tampering detection device of claim 11further comprising:
A conventional multi-zone security system through which lockset tampering alarms may be annnounced
A protected area, comprised of one or more zones, each secured by one or more lockset tampering detection de-

vices.

Conventional means for the concurrent or rapid sequential determination of the state of each of the lockset tampering detection devices used to secure said protected area.

[c13] The lockset tampering detection device of claim 12 further comprising:

Means to arm said conventional multi-zone security system when all of said lockset tampering detection devices in said protected area are determined to be in their armed state.

Means to selectively arm specific zones of said multi-zone security system when all the lockset tampering detection devices within said zones are determined to be in their armed state.

[c14] The lockset tampering detection device of claim 12 further comprising:

Means to disarm said conventional multi-zone security system when any of said lockset tampering detection devices in said protected area are determined to be in their disarmed state.

Means to selectively disarm specific zones of said multi-zone security system when any lockset tampering detection devices within said zones are determined to be in their disarmed state.

[c15] The lockset tampering detection device of claim 12 further comprising:
Means to alarm said conventional multi-zone security system when any of said lockset tampering detection devices in said protected area are determined to be in their alarmed state.
Means to selectively alarm specific zones of said multi-zone security system when any lockset tampering detection devices within said zones are determined to be in their alarmed state.

[c16] The lockset tampering detection device of claim 12 further comprising:
Means to disable an indavertant alarms of said multi-zone security system when the lockset tampering detection device that originated the alarm is reset through the sequential unlocking and relocking of the lockset monitored by said lockset tampering detection device.

[c17] The lockset tampering detection device of claim 12 further comprising:
Means to selectively arm only the perimeter and not the area components of said conventional multizone security system when all of said lockset tampering detection devices in said protected area are determined to be in their armed state and when an authorized person is detected

within the area secured by the lockset tampering detection devices.

Means to selectively arm only the perimeter and not the area components of one or more specific zones of said conventional multizone security system when all of said lockset tampering detection devices in said specific zones are determined to be in their armed state and an authorized person is detected within the zone secured by the lockset tampering detection devices.

[c18] The lockset tampering detection device of claim 17 further comprising means to:

Automaticaly enable area components of said conventional multi-zone security system, upon detection of the departure of authorized occupants as signalled by the disarming and rearming of said lockset tampering detection device without alarm, followed by a suitable interval of the area components of said conventional multi-zone security system not detecting the presence of individuals in said protected area.